REMARKS

The non-final Office Action dated October 3, 2001 has been received and its contents carefully studied. Reconsideration of the rejections of the claims is respectfully requested in view of the foregoing amendments and the following remarks. A marked-up version of the claims is enclosed.

Claims 1-18 are pending and are all rejected. New claim 19 is also now pending. The independent claims are claims 1, 2, 10-15, and 19. All the other claims are dependent. The independent claims 1, 2, and 10-15 are all rejected as anticipated by *Chaney* (U.S. Patent No. 5,867,207) under 35 USC §102(e). These independent claims are also rejected as anticipated by *Teresawa* (U.S. Patent No. 6,147,714) under 35 U.S.C. §102(e). Dependent claims 3-6 and 16-18 are also rejected as anticipated by *Teresawa* under 35 U.S.C. §102(e). Dependent claims 7-8 are rejected as obvious from *Teresawa* under 35 U.S.C. §103(a). Dependent claim 9 is rejected as obvious from *Teresawa* in view of *Shoff* (U.S. Patent No. 6,240,555) under 35 U.S.C. §103(a).

Information Disclosure Statement

Applicant assumes that the Examiner's initials on sheet 2 of the Form PTO-1449 received by the Patent and Trademark Office (PTO) on April 9, 2001 signify that both items on that page have been initialed, including the last item ("Uniform Resource Locators"). Regarding the other Form PTO-1449 initialed by the Examiner, we submitted that PTO Form 1449 with a statement that we would submit a complete copy of EPO document 0778512 shortly thereafter, and we assume that the Examiner's initials indicate receipt of that complete copy.

Indefiniteness

The pending independent claims are objected to under 37 CFR §1.75 because different networks are in parentheses. Similarly, these claims are also rejected under 35 U.S.C. §112 and MPEP §2173.05(d) as being indefinite because it is unclear if the parenthesized terms are meant to limit the claims. Applicant is aware that, according to MPEP §2173.05(d), exemplary language in the claims is confusing and indefinite. Applicant is also aware that using

abbreviations in claims is acceptable. See MPEP §608.01(m). However, the applicant has no objection to now amending the claims so that no parenthesized terms are used in any of the claims, in order to expedite allowance.

Some of the parenthesized material in claim 1 is now described directly in that claim without any parentheses. It is respectfully believed that this language inserted into claim 1 improves the clarity of that claim, and helps to explain why the present claimed invention is not disclosed or even suggested by the two references cited against the pending independent claims.

Neither *Chaney* nor *Terasawa* Anticipates the Present Claimed Invention

Independent claims 1, 2, and 10-15 are all rejected as anticipated by *Chaney* and alternatively by *Terasawa*. It is respectfully believed that none of these rejected independent claims, as presently amended, is anticipated by *Chaney* or *Terasawa*. Applicant believes that the indefiniteness which the Examiner identified in the claims has now been eliminated, and therefore the claims are much more clearly distinguishable over the cited art.

The applicant has also amended the claims in order to emphasize two very important features of the present invention. First, the name information assigned to the service (or to the service components) is individual throughout the whole data communication system. Second, the name information is globally identifiable in text form (i.e., in a form that is non-numerically descriptive). New claim 19 is the same as claim 1, except that the words "non-numerically descriptive" are used instead of "textual."

An essential aspect of the present patent application is that the name is individually assigned to services and/or service components. This name is textual and is easy for humans to understand and remember, and is also globally individual so that it uniquely identifies the service. Numeric identifiers of a service are, of course, known technology, and a novel feature of the present claimed invention is that the individual name is mapped to the numeric identifiers.

The importance of the name information being "individual" is discussed in the application (e.g., page 7, line 23; page 12, line 32). Likewise, the "globally identifiable" feature of the name information is discussed at least by page 12 of the application, line 33. And, the

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importance of the name information being "non-numerically descriptive" (or textual) is discussed at least by page 6 of the application, lines 20-22 and page 11 of the application, lines 26-33, as well as by way of examples.

The non-final Official Action (page 4, first two paragraphs) asserts that *Chaney* anticipates the present claim 1. In the succeeding four paragraphs of the non-final Official Action, the same reasoning is applied to all of the other rejected independent claims.

Applicant has carefully studied *Chaney*, and believes that the present amended claims are not anticipated or suggested by *Chaney*. The *Chaney* patent merely describes a typical electronic program guide application, but is unrelated to textual globally individual identifying names for services. The non-final Official Action (page 4, second paragraph) points to column 5, lines 44-60 of *Chaney*, but that paragraph of *Chaney* merely discusses a user who moves a cursor on a screen, and who then presses a select key to make a selection. As discussed in the application (page 6, lines 20-22), a numerical address is difficult to remember, and does not easily reveal what type of service is in question, and the present invention solves this problem by relating such an address to a name address which is easy to remember and easily reveals what type of service is in question. *Chaney* does not address or solve this problem.

Regarding *Teresawa*, the non-final Official Action (at page 6) focuses on column 8, lines 40-65 thereof, as anticipating present claims 1 and 2. However, like *Chaney*, *Teresawa* is directed to a different situation than is described by the present amended claims. It is evident from *Teresawa's* abstract that, again, the idea is to simply be able to move a cursor on a screen in order to make a selection. Regarding Digital Video Broadcasting Service Information (DVB SI), *Teresawa* describes only a known mechanism; DVB SI already contains a service provider name and service name in the service descriptor, and these names are not guaranteed to be globally individual in any way. For example, in Finland, one service might have "YLE" as the service provider and "TV1" as the service name. There is no guarantee that in some other country there may well be a different service with name "TV1" and the service provider might be called "YLE" by coincidence. Therefore, this existing name is only for information purposes to the end user but cannot be used as a globally individual identifier. The present invention is to use an

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identifying name such as "tv1.yle.fi" that is guaranteed to be globally individual to that service in text form. The non-final Official Action is correct that *Teresawa* uses a program number that is equivalent to a service ID (see column 8, lines 45-47). However, *Teresawa* does not suggest why such a program number would be used in the manner of the present claimed invention.

With respect to present claim 9, *Teresawa*, in view of *Shoff*, does not teach or suggest the present claimed invention. The non-final Official Action acknowledges (at page 9 of the Official Action) that *Teresawa* does not teach the use of URL addressing with respect to name information of an available service. *Shoff* teaches that supplemental content could be broadcast as part of. the same program signal over the broadcast network, or separately over another distribution network, and discloses that the supplemental content is a URL address. However, *Shoff* does not teach or suggest that the URL address would globally identify the name for services in text form; *Shoff* merely teaches that in utilizing the URL, a viewer can, by a conventional Internet browser, view conventional Internet content addressed by the supplemental URL. Moreover, in *Shoff*, the channel must be interactive. Therefore *Teresawa*, in view of *Shoff*, teaches an arrangement in which merely a supplemental Internet address (indicated by a URL) is associated with a broadcast transport stream, and in which broadcast transport contains a service provider name and service name located in the service descriptor table (SDT) as service information (SI). This combination of *Teresawa* in view of *Shoff* would therefore give no hint or suggestion of a relation between the textual globally individual identifying name information and the service identification data (which identifies at least an originating transmission network of the data communication system, a transmission stream within the at least one transmission network, and the service within the transmission stream), wherein the service identification is retrievable based upon the textual globally individual identifying name information and the relation.

Furthermore, with respect to claim 9, it is recognized that a URL address is transmitted in *Shoff*, but in order to access conventional internet content a conventional browser would be required according to *Shoff*. This is because conventional internet content is not transmitted in

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the transmission stream of *Shoff's* broadcast and so it is instead obtained via a separate interactive network (for example, via internet to a computer).

The present claimed invention not only will be of assistance to the human user typing in the textual globally individual names. That is one possibility, but a more important advantage of the present claimed invention is that the textual globally individual names can be used in URLs that are included in web pages and other applications that come from servers. This invention, therefore, has a big advantage over numeric identifiers because, for example, the same television service (like "YLE TV1") may be carried in different networks (e.g., in different cable networks in different cities, in terrestrial broadcasts, and in satellites) whereas the numeric identifiers may be different in each network even when the service (e.g., YLE TV1) is always the same. Using the textual globally individual name and the mapping from the name to the numeric identifiers allows the same name to be used for referring to the service, even if it maps to different numeric identifiers in different networks. This is the main purpose for assigning such a name, and the cited prior art does not suggest this innovative mapping of the present claimed invention .

CONCLUSION

The present invention is that the services are assigned a textual globally individual identifying name that can be used for referring to that service. This name is then mapped to the numeric identifiers as described in the patent application, and this mapping may result in different numeric identifiers being the result in different networks where the same service (with the same name) is carried.
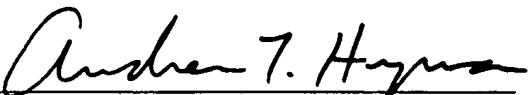
Applicants respectfully submit that the amended claims of the present application define patentable subject matter and are patentably distinguishable over the cited references for the reasons explained. The rejections of the Official Action of October 10, 2001 having been shown to be inapplicable, retraction thereof is requested, and early passage of claims 1-19 to issue is earnestly solicited.

Applicant would appreciate if the Examiner would please contact Applicant's attorney by telephone, if that might help to speedily dispose of any unresolved issues pertaining to the present application.

Respectfully submitted,

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Marked-Up Version Indicating Changes Made

In the Claims:

Please **amend claims 1-3 and 9-16** and **add new claim 19** as follows:

1.   (Twice Amended) Method [for] of addressing at least one service, in a data communication system [comprising] that includes at least one data transmission network [(6, 12a, 12b, 15a, 15b, 16, 17)] for transmitting information in at least one MPEG data transmission stream [(TS), in which method], the method comprising the steps of:

transmitting [one or several service providers transmits services] a service from at least one service provider to [one or several] the at least one data transmission network [networks (6, 12a, 12b, 15a, 15b, 16, 17)], and

assigning service identification data to the service [is assigned service identification data], which identifies at least an originating transmission network of the data communication system, a transmission stream within the at least one data transmission network, and the service within the transmission stream [(original_network_id, transport stream_id, service_id)],

wherein, [on the basis of] based upon the service identification data [(original-network_id, transport_stream_id, service_id)], the data transmission stream [(TS)] and a location therein is retrievable for use,

[characterized in that] wherein the service is assigned [an] textual globally individual identifying name information [(service_provider_name, service_name)] and a relation between the textual globally individual identifying name information and the service identification data, and

wherein, [on the basis of the] based upon the textual globally individual identifying name information [(service_provider_name, service_name)] and the relation, the service identification is retrievable.

2.   (Twice Amended) Method [for] of addressing at least one service among plural services, or for addressing at least one service component, in a data communication system [comprising] having at least one data transmission network [(6, 12a, 12b, 15a, 15b, 16, 17)] that is for transmitting information in at least one MPEG data transmission stream, [(TS), in which method:] at least one of the plural services [includes] including said at least one service component, the method comprising the steps of:

transmitting the at least one service from at least one of several service providers [transmits said services] to [one or more] the at least one data transmission network, [networks (6, 12a, 12b, 15a, 15b, 16, 17), wherein]

assigning identification data to each of the at least one service, [is assigned identification data] which identifies at least an originating transmission network of the data communication system, a transmission stream within the at least one data transmission network, and the at least one service within the transmission stream [(original_network_id, transport_stream_id, service_id) for identifying the service], and

assigning identification data to the at least one service component [is assigned identification data (original_network_id, transport_stream_id, service_id, event_id, module_id, component_tag)] for identifying the at least one service component as well as identifying a service for transmitting the at least one service component,

wherein the identification data assigned to the at least one service component [(original_network_id, transport_stream_id, service_id, event_id, module_id, component_tag)] is for serving as a basis [for retrieving] to retrieve the data transmission stream, which is [(TS)] for transmitting the at least one service and the at least one service component, and to retrieve a [the] location in the data transmission stream [(TS)],

wherein the [characterized in that] at least one [of the] service [and the] or the at least one service component are assigned textual globally individual identifying name information [(service_provider_name, service_name)] and a relation between the textual globally individual identifying name information and the identification data, and

wherein, [on the basis of the] based upon the textual globally individual identifying name information [(service_provider_name, service_name)] and the relation, at least one of the identification data of the at least one service [and] or the at least one service component is retrievable.

3.   (Twice Amended)   Method according to claim 1, characterized in that the data transmission streams [(TS)] are data transmission streams complying to the DVB definitions.

9.   (Twice Amended)   Method according to claim 1, characterized in that the name information are used as part of [the] a URL address.

10.   (Twice Amended) Data communication system comprising at least one data transmission network [(6, 12a, 12b, 15a, 15b, 16, 17)] for transmitting information on services in at least one data transmission stream [(TS)], the system comprising:

[which system comprises] equipment for transmitting [services] at least one service of one or several service providers to [one or several] the at least one data transmission network [networks (6, 12a, 12b, 15a, 15b, 16, 17)], [and] the at least one service [is] being assigned identification data which identifies at least an originating transmission network of the data communication system, a transmission stream within the at least one data transmission network, and the at least one service which is within the transmission stream, [(original_network_id, transport_stream_id, service_id), characterized in that the system further comprises:]

means for assigning to the at least one [the] service a textual globally individual [an] identifying name information, [(service_provider_name, service_name)] and

means for forming a relation between the textual globally individual name information and the identification data,

wherein, [on the basis of the] based upon the textual globally individual name information [(service_provider_name, service_name)] and the relation, the service identification is retrievable.

11.   (Twice Amended) Data communication system [comprising] <u>including</u> at least one data transmission network [(6, 12a, 12b, 15a, 15b, 16, 17)] for transmitting information on services in at least one data transmission stream [(TS)], [in which system:] the services [include] <u>including</u> at least one service component[, there are] <u>and</u> means for transmitting <u>the</u> services of one or several service providers to one or several data transmission networks [(6, 12a, 12b, 15a, 15b, 16, 17)],

        <u>wherein</u> the [service is] <u>services are</u> assigned identification data <u>which identifies at least an originating transmission network, a transmission stream within the at least one data transmission network, and each of the services which is within the transmission stream</u> [(original_network_id, transport_stream_id, service_id) for identifying the service], and

        <u>wherein</u> the <u>at least one</u> service component is assigned an identification [information] <u>data</u> [(original_network_id, transport_stream_id, service_id, event_id, module_id, component_tag)] for identifying the <u>at least one</u> service component as well as <u>identifying a</u> [the] service [to be used] for transmitting the service component<u>, and</u>

        wherein the identification data [(original_network_id, transport_stream_id, service_id, event_id, module_id, component_tag)] is for [retrieving] <u>retrieval of</u> the data transmission stream [(TS)] <u>which is useful</u> for transmitting the [service] <u>services</u> and <u>for transmitting the at least one</u> [the] service component, and <u>retrieval of</u> a location in the data transmission stream [(TS), characterized in that the system further comprises] <u>, the system comprising</u>:

        means for assigning<u>,</u> to at least one of the [service] <u>services</u> and the <u>at least one</u> service component<u>, textual globally individual</u> identifying name information<u>,</u> [(service_provider_name, service_name)] and

        means for forming a relation between the <u>textual globally individual identifying</u> name information and <u>the</u> identification data,

        wherein<u>,</u> [on the basis of] <u>based upon</u> the <u>textual globally individual identifying</u> name information [(service_provider_name, service_name)] and the relation<u>,</u> at least one of the identification data of the service and the service component are retrievable.

12.   (Twice Amended) Broadcasting device [(1a, 1b, 1c, 2, 3, 4, 5)] for transmitting at least one service in a data communication system wherein the data communication system includes [comprising] at least one data transmission network [(6, 12a, 12b, 15a, 15b, 16, 17)] for transmission of information in at least one data transmission stream [(TS)], [in which data communication system the] ^nd wherein the at least one service is assigned identification data which identifies at least an originating transmission network, a transmission stream within the at least one data transmission network, and the at least one service which is within the transmission stream [(original_network_id, transport_stream-id, service_id)], comprising:

[characterized in that the device further comprises] means [(3)] for transmitting textual globally individual identifying name information for identifying the at least one service, [(service_provider_name, service_name)] and a relation between the textual globally individual identifying name information and the identification data, to the data transmission network; and

means for transmitting the at least one service.

13.   (Twice Amended) Broadcasting device [(1a, 1b, 1c, 2, 3, 4, 5)] for transmitting at least one of a service and service component, in a data communication system which includes [comprising] at least one data transmission network [(6, 12a, 12b, 15a, 15b, 16, 17)] for transmission of information in at least one data transmission stream [(TS)], [in which data communication system:]

wherein the service, which is transmissive by the data communication system, is assigned identification data that identifies at least an originating transmission network, a transmission stream within the at least one data transmission network, and the service which is within the transmission stream [(original_network_id, transport_stream_id, service_id)] for identifying the service, and

wherein the service component, which is transmissive by the data communication system, is assigned identification data [(original_network_id, transport_stream_id, service_id, event_id, module_id, component_tag)] for identifying the service component as well as a service for

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transmitting the service component, [characterized in that the device further comprises] the broadcasting device comprising:

means [(3)] for transmitting a textual globally individual identifying name information which identifies [identifying] the service, [(service_provider_name, service_name)] and also identifies a relation between the textual globally individual identifying name information and the identification data, to the data transmission network; and

means for transmitting the at least one of a service and service component.

14. (Twice Amended) Receiver [(7)] for receiving at least one service in a data communication system, the data communication system including [comprising] at least one data transmission network [(6, 12a, 12b, 15a, 16, 17)] for transmission of information in at least one data transmission stream [(TS)], in which data communication system the service is assigned identification data that identifies at least an originating transmission network, a transmission stream within the at least one data transmission network, and the service which is within the transmission stream, the receiver comprising: [(original_network_id, transport_stream_id, service_id), characterized in that the receiver (7) further comprises:]

means [(10)] for receiving [the] textual globally individual identifying name information [(service_provider_name, service_name) identifying] that identifies the service as well as a relation between the name information and the identification data, and

means [(10)] for determining the service identification data [on the basis of] based upon the relation between the textual globally individual identifying name information and the identification data.

15. (Twice Amended) Receiver [(7)] for receiving at least one of a service and a service component in a data communication system [comprising] which includes at least one data transmission network [(6, 12a, 12b, 15a, 15b, 16, 17)] for transmission of information in at least one data transmission stream [(TS)], in which data communication system:

wherein the service transmissive by the data communication system has been [is] assigned identification data which identifies at least an originating transmission network, a transmission stream within the at least one data transmission network, and the service which is within the transmission stream [(original_network_id, transport_stream_id, service_id)] for identifying the service,

wherein the service component transmissive by the data communication system has been [is] assigned identification data [(original_network_id, transport_stream_id, service_id, event_id, module_id, component_tag)] for identifying the service component and a service for transmission of the service component, [characterized in that the receiver (7) further comprises:] the receiver comprising:

means [(10)] for receiving [the] textual globally individual identifying name information [(service_provider_name, service_name)] identifying at least one of the service and the service component as well as a relation between the name information and the identification data, and

means [(10)] for determining the service identification data [on the basis of] based upon the relation between the name information and identification data.

16.   (Amended) Method according to claim 2, characterized in that the data transmission streams [(TS)] are data transmission streams complying to the DVB definitions.

19.   (New) Method of addressing at least one service in a data communication system that includes at least one data transmission network for transmitting information in at least one MPEG data transmission stream, the method comprising the steps of:

transmitting a service from at least one service provider to the at least one data transmission network, and

assigning service identification data to the service, which identifies at least an originating transmission network of the data communication system, a transmission stream within the at least one data transmission network, and the service within the transmission stream,

wherein, based upon the service identification data, the data transmission stream and a location therein is retrievable for use,

wherein the service is assigned non-numerically descriptive globally individual identifying name information and a relation between the non-numerically descriptive globally individual identifying name information and the service identification data, and

wherein, based upon the non-numerically descriptive globally individual identifying name information and the relation, the service identification is retrievable.